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ABSTRACT

This thesis is an analysis of data concerning drug usage among three groups of young soldiers and isolates significant factors relating to characteristic interpersonal and intrafamilial relationships prevalent in these groups. Those soldiers dependent on drugs all came from families that they considered disharmonious. The following variables discriminated drug-dependent individuals: family relationship, father relationship, neighborhood status, teacher relationships, school preference, opium usage, barbiturate usage, marihuana usage, arrests, convictions, whether the natural parents were living, and whether the individual lived at home until the age of 16. To differentiate between drug users and non-drug users, the study derived a predictive formula consisting of family relationship, teacher relationships, marihuana usage, and arrests. The author suggests the incorporation of sophisticated testing into Army selection procedures to detect maladjusted young men. (Author/LAA)

DRUG DEPENDENCE--A COMPARATIVE STUDY TO DISCOVER SIGNIFICANT FACTORS RELATING TO INTERPERSONAL AND INTRAFAMILIAL RELATIONSHIPS PREVALENT IN A GROUP OF TRAINEES AT FORT SAM HOUSTON, TEXAS

ABSTRACT OF THESIS

Presented to the Faculty of the Graduate School of
Trinity University in Partial Fulfillment
of the Requirements

For the Degree of

Master of Science
in
Health Care Administration

By

Patricia M. Kearns, B.A.

This thesis accumulates and analyzes data concerning drug usage among three groups of young soldiers and attempts to isolate the significant factors relating to characteristic interpersonal and intrafamilial relationships prevalent in the three groups.

The most significant characteristic of those soldiers who became dependent on drugs was the fact that those soldiers all came from families which they considered unhappy or disharmonious. Soldiers in this category were

unable to function properly and could not complete their training.

The variables of importance which discriminated the drug dependent individuals were: family relationship, father relationship, neighborhood status, teacher relationships, school preference, opium usage, barbiturate usage, marijuana usage, arrests, convictions, whether the natural parents were living together, and whether the individual lived at home until age 16. These variables produced a descriptive formula which the Army could use to distinguish drug dependent individuals from others.

A predictive formula, consisting of family relationship, teacher relationships, marijuana usage, and arrests, was derived from the descriptive formula. This formula supplies the Army with a list of factors which can predict drug use. The results of this study substantiate the fact that our "marked" population can be differentiated from the normal population. Thus, if the Army would incorporate the use of sophisticated testing procedures in their selection process, these maladjusted young men would be recognized and both time and money would be saved.

The subject matter for this thesis was chosen purposely to emphasize to the health care administrator that to meet the total health needs of a people, he must become aware of the problems of drug users and attempt to do something about

those problems. He must realize that health is defined as the physical, mental, and social well-being of an individual and be prepared to cope with any or all of these aspects of health.

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Chapter 1

INTRODUCTION

Drug abuse is found throughout all spheres of society. It is common to people of all races, all creeds, all occupations, and all ages; to the rich and to the poor, laborers and professionals, children under ten and elders over seventy, law enforcers and delinquents, housewives and careerwomen--to the whole span of the human family. There is no clearly defined "dope fiend" type of person.

In order to be conversant with the narcotic problem, the health care administrator needs to know something about narcotic drugs. He is probably not interested in becoming an expert, but at least he will want to know which drugs are addicting, what they do to the body, and what effect they have upon the emotions. This study does not answer these specific questions for an administrator, however, it does present some useful implications for intervention in the abuse of drugs, both in military and civilian society.

The World Health Organization defines health as the physical, mental, and social well-being of an individual. Since drug dependency covers the whole gamut, the entire range of health or ill health, it is imperative that health care administrators become cognizant of and sympathetic to the problems of the drug abuser and our drug-using society.

What appears to be the best deterrent to drug abuse is the individual's value system and his assessment of the consequences associated with drug involvement. Therefore, this study was an attempt to isolate significant factors relating to characteristic interpersonal and intrafamilial relationships prevalent in a group of trainees who entered the drug rehabilitation program at Fort Sam Houston, Texas. These trainees were compared to a second group who successfully completedadvanced individual training and to a third group of administrative dischargees. The aim was to discover whether a distinction relating to a participating or precipitating role in causing antisocial behavior (drug dependency) could be made between these three groups of late adolescent males by means of a biographical questionnaire.

Perusal of the literature reveals scanty reference to the Army drug dependent patient and the identification of socio-economic, environmental, and personality factors which may predispose the vulnerable individual. Freedman and Rockmore (1946:765-782) found the average length of marijuana use was 7.1 years and found no deteriorating effect in the user. The authors stated that the general results did not support condemning the use of the drug, but would not recommend its use. They stated that continued emphasis should be placed on the basic personality structure of the user, in order to understand the basis for the use of the drug, which may have no more than a participating or precipitating role in causing antisocial behavior.

It is doubtful that anybody knows how much drug use existed in the Army during the 1950's and early 1960's. Some may have regarded it as a matter for serious concern, but nothing official was done until 1962 when a White House Conference on Narcotic and Drug Abuse was convened in recognition of the fact that drug traffic and abuse were growing. In 1963 the President's Advisory Commission on Narcotic and Drug Abuse was created. It was not until December, 1970, when a major program aimed at the prevention and control of drug abuse was established throughout the U. S. Army (Army Regulation 600-32).

"We cannot correctly assume, however, that because many users of the non-alcoholic drugs were not seen that abuse of such drugs was therefore almost unknown in the Army before 1970. Indeed, there was a number of papers in the World War II literature which discuss drug use as a problem. For example, Marcovitz and Meyers (1944:382-391), two Army psychiatrists, reported on their experience with Marijuana users in 1944 in a paper with the interesting title 'The Marijuana Addict in the Army'" (Maillet 1970:2-3).

These authors focused their attention on the socioeconomic factors in the background of the addict; the personality picture of the addict; the functions of addiction in the user's personal economy; the difficulties presented by the marijuana addict in the military milieu; and the means chosen by military authorities to deal with the marijuana addict.

"In all but one instance, the users discussed in that paper were black; and almost all came from low socioeconomic circumstances. Only five of the soliders had completed high school and most had been employed only very irregularly. Most were reported as coming from broken or otherwise disturbed homes."

If Freedman and Rockmore and Marcovitz and Meyers were now conducting their studies they probably would not for long limit their interest to marijuana because of "the increasing case load of users of the barbiturates, the amphetamines, and the opiates who now present themselves so much more dramatically than do the users of marijuana." (Maillet 1970:6).

According to Roth (1972), neither broken homes, nor low social class, nor slum conditions seem to have a predictable influence on the kind of delinquent child who may grow up to become a violent person or one who may stray into antisocial behavior. Roth points out that upon examination of backgrounds of thousands of young delinquents from all walks of life, the only common denominator was family disharmony. Whether the home was broken or intact, whether it was in a slum or a rich neighborhood, did not seem to matter. What mattered was the quality of personal relationships within the home.

If a young mother was abandoned by her husband and left to rear her children alone, and she did it with a strong sense of loyalty, cooperation, trust and love--in short, harmony--then her children were not likely to become delinquent,

regardless of their poverty or the miserable conditions abounding around them. In striking contrast, an affluent home in which husband and wife remained together but fought constantly and raged at the children--disharmony--was likely to produce delinquents. The more violent the parents, whether in an intact home or a broken one, the more likely it is that the taste for violence will be passed along to the children, according to Roth.

He even went back to previous generations in the families that he studied and discovered a kind of breeding pattern: violent, unharmonious parents were themselves the products of violent homes. The characteristic passes by example from generation to generation. The fact that delinquency and crimes of violence are more common in overcrowded urban ghettos than elsewhere does not necessarily mean that ghettos by themselves breed crime and drug dependency. It simply means that underprivileged social and racial groups contain more disruptive, unharmonious families, probably because of the resentments and privations that life forces upon them.

Roth cites Sweden, where there are no ghettos, no minority groups, and everyone is guaranteed a decent standard of living from cradle to grave. Yet in Sweden, as in every other advanced country, crime and delinquency have soared in the last two decades. Roth further cites the fact that young people whose behavior takes the form of drug dependence, alcoholism or even attempted suicide often show the same patterns of maladjustment

and disruptive family background as those who take to crime and violence. The common denominator is a lack of harmony at home.

Society can do much to encourage an individual's self-development. The most important thing it can do is to remove the obstacles to individual fulfillment. This means doing away with the gross inequalities of opportunity imposed on some of our citizens by race prejudice and economic hardship. And it means a continuous and effective operation of talent salvage to assist young people to achieve the promise that is in them. The benefits are not only to the individual but to the society. Conrad (San Antonio Light:1973) Director of the Clinical Research Center in Lexington, Kentucky, states that most of the Center's patients have a long history of severe disturbance in their relationship with other people and society long before they use drugs. He further states that a lot of the problems his patients have relate not only to the chemicals but to their real life. Conrad's position is in agreement with that of Roth's.

In a recent issue of Hospital Tribune (1973), the question was raised as to whether or not wayward physicians could be screened out before admission to medical school. It was further raised that the admissions process should be able to identify and screen out the potential deviant physician. According to Ray L. Casterline, president of the U. S. Federation of

State Medical Boards,medical school applicants should submit to the same battery of personality tests the National Aeronautics and Space Administration gives for astronauts.

As a panel moderator at the 69th Annual A.M.A. Congress on Medical Education, Casterline contended that such tests are a necessary and viable means to rid the profession of those physicians who later in life become alcoholics or covert drug users, sink into moral turpitude, or become so emotionally unstable that the practice of medicine suffers.

At the same Congress, George Vaillant, Associate Professor of Psychiatry at Harvard, said, "The potential for deviance is within the individual." He presented the findings of a three-decade study of Harvard graduates, particularly physicians, which followed their careers to date. Vaillant found a remarkable correlation between what he described as an "unhappy childhood" and marital and emotional difficulties in later life. The student coming from such a background could be identified, he said, through psychologic testing, as well as during personal interviews.

This study attempted to isolate the significant factors relating to characteristic interpersonal and intrafamilial relationships prevalent in three groups of trainees and agrees with Vaillant that there is a correlation between an "unhappy childhood" and emotional difficulties in later life. It also presents useful implications for intervention in the abuse of drugs, both in military and civilian society.

Chapter 2

STATEMENT OF THE PROBLEM

Drug usage in the Army has accelerated rapidly as it has in the civilian community. While its impact on military performance has not been adequately determined, military and civilian leaders are extremely anxious about the phenomenon. If socioeconomic, environmental, or personality factors could be identified as factors which predispose the vulnerable individual, appropriate screening could keep these individuals from entering the new Modern Volunteer Army.

Golembiewski suggests (1965:87-115) that the more satisfied an individual is with his family life, the more happy he is with his job. In turn, when individuals are asked how satisfied they are with life in general, their answers are closely associated with their satisfactions in family and occupational roles. The investigation of the life of a person on his job within large organizations is passing from its early descriptive beginnings to a more rigorous, hypothesis-testing phase. The Army would benefit from this knowledge by pursuing this testing phase in screening volunteers with the intention of recognizing maladjusted young people who are unable to solve problems and, instead, create drug problems for the Army.

Students of industrial sociology, personnel and human relations, management, public administration, and industrial

psychology have begun to approach the study of human behavior in organizations by focusing on similar problems in a systematic fashion. We are beginning to understand that a growing person has unrealized power if his self-image, his expectation of himself, his self-direction, and his constantly broadening perceptions allow him to find it. There are risks in the use of testing. But the payoffs--for individuals and for the Army--seem well worth the risks.

Individual payoffs are ample and include such things as reducing an individual's dissatisfaction with his life, his job, his disappointments. It means giving him an opportunity to find his set of values, his calling in life, his needs.

For the Army, it could mean a savings of thousands of dollars. Lieutenant Colonel Rudolf G. Bickel, Medical Corps, U. S. Air Force, stated in an address "Multiphasic Screening Applications" at the Academy of Health Sciences, U. S. Army, Fort Sam Houston, on April 3, 1973, that behavioral problems account for over half of the early discharges in the armed services. At Fort Sam Houston, from May 1, 1972 to May 1, 1973, thirty-four trainees were discharged due to maladjustment based solely on drug problems. To train a soldier over an eight-week basic training period and a ten-week medical training period, it costs the Army approximately $10,000 (Command Operating Programs: 1972). When you multiply this figure by the number of early discharges due to maladjustment, this reflects a substantial figure.

As Roth pointed out, the only common denominator between thousands of young delinquents was family disharmony. This disharmony is definitely reflected in a man's self-image.. A low self-image can cause a man to function poorly. He can project this tendency and his subsequent counter-hostility onto other people, who then seem to him to be hostile when they actually are not. The groundwork, thus, for initial compliance to adult expectations, as well as for later identifications and for eventual integration into a man's own personality of institutional and individual adult standards and attitudes, is laid in our early years.

Whatever the conditions under which a child grows up, he will, if not mentally defective, learn to cope with others in one way or another and he will probably acquire some skills. But there are also forces in him which he cannot acquire or even develop by learning. You need not, and in fact cannot, teach a tadpole to grow into a frog, but when given a chance, its intrinsic potentialities will develop. Similarly, the human individual, given a chance, tends to develop his particular human potentialities. He will develop depth of his own feelings, thoughts, wishes, interests; the ability to tap his own resources, the strength of his will power; the special capacities or gifts he may have; the faculty to express himself, and to relate himself to others with his set of values and his aims in life. Young people who have no set of values

are at a significant loss when it boils down to his assessment of the consequences associated with drug involvement.

Only the individual himself can develop his given potentialities. But, like any other living organism, the human individual needs favorable conditions for his growth "from tadpole into frog"; he needs an atmosphere of warmth to give him both a feeling of inner security and the inner freedom enabling him to have his own feelings and thoughts and to express himself. He needs the good will of others, not only to help him in his many needs but to guide and encourage him to become a mature and fulfilled individual. He also needs healthy friction with the wishes and wills of others. If he can thus grow with others, in love and in friction, he will also grow in accordance with his real self. But through a variety of adverse influences, including family disharmony, a child may not be permitted to grow according to his individual needs and possibilities.

The adverse influences, when summarized, all boil down to the fact that the people in the environment are too wrapped up in their own neuroses to be able to love the child, or even to conceive of him as the particular individual he is; their attitudes toward him are determined by their own neurotic needs and responses. In simple words, they may be dominating, overprotective, intimidating, irritable, indifferent, etc. It is never a matter of just a single factor, but always the whole

constellation that exerts the untoward influence on a child's growth (Horney 1964:18).

Even though there is no clearly defined "dope fiend" type of person, there is an "American" type of person, who has the feelings of low self-esteem or self-worth and continually needs the approval of others, who never really wants to solve problems, and who for all intents and purposes is unable to solve problems. This type of person avoids solutions in favor of easy answers ("fixes"), a faulty approach for which he receives constant encouragement from the mass media's advertising messages. In some cases the search for easy answers leads him to the use and abuse of drugs (Frykman 1971:5-12).

It is imperative for the Army to be able to determine pre-existing states of mind and attitudes of young men about to enter the military service. The Army should be able to screen volunteers with the intention of recognizing maladjusted young people who are unable to solve problems and, instead, create drug problems for the Army.

If, however, the Army is able to screen volunteers and can restrict the entry of maladjusted young people, these individuals would be left in the civilian community where they could become dopers, pushers, thieves. The civilian community could take advantage of the Army's current efforts to set up "rap" houses which may provide an important model for tackling the problem of drug abuse in the civilian society.

One method of coping with the problem of drug abuse and the accompanying cultural divisions is to bring members of various groups together so that they interact on a meaningful level. At a time of tremendous differences amoung groups in the general society--e.g., young and old, black and white, rich and poor--this is obviously difficult. An integral part of the problem seems to be the lack of enough flexibility in American society to prevent such polarization of values. Young soldiers,however, represent a cross section of America's young people.

Meaningful involvement of heterogeneous groups appears to be a prerequisite for effective prevention of drug-abusing behavior (Rardin, et al.:1973), therefore, the civilian community should utilize the knowledge the Army has gained in their efforts to treat drug abusers.

For the purpose of this study, it must be pointed out that there is a difference between "drug dependence" and "drug abuse." Drug dependence comes about from taking certain drugs regularly and often in increasing amounts and at shorter intervals. Dependence is based on a psychological or emotional need to continue taking a drug because of the relief of uncomfortable tension or the apparent feelings of pleasure or well-being that can result. In the case of drugs that depress the central nervous system, dependence also is based on a physical need, added to the psychological.

Drug abuse does not always result in dependence. When

it does, it is because the roots of dependence lie within the psychological makeup of the individual himself, rather than in the properties of the drug. The drug feeds these roots and makes them grow. If the individual had not turned to drugs for this "nourishment" he might have used other harmful means of relieving his tensions and anxieties. Or, with help, he could have found constructive ways to deal with his problems (Committee on Alcoholism and Drug Dependence: 1968).

Chapter 3

METHOD

Survey Form

This survey was conducted through the use of a five-page questionnaire. The questicnnaire consisted of 64 questions (See Appendix A). Specific instructions to exclude all identifying information were given verbally and strong emphasis was placed on the fact that all information would be kept anonymous. It was also stressed that the information obtained from the survey was for research which would ultimately be used by the writer as the basis of this thesis.

Pretesting

The instrument was modified as a result of pre-testing. The pretest questionnaire was administered by the researcher to selected soldiers in the Drug Rehabilitation Program. Although these persons were members of the survey population, data collected in the pretest was not reported in the results presented in the study.

Basic inadequacies of the test instrument were noted as a result of pretesting and the questionnaire was revised. The modifications consisted of a revision of several questions and improvements in the coding method.

Although many different aspects were considered during preparation of the questionnaire, the final form placed emphasis

on the following topics: (1) Individual Information; (2) Family Information; (3) Military Information; and,(4) Drug Information. Within these groups, questions were included about relationships with parents and authority figures, experiences in neighborhoods and also number of arrests and convictions.

Procedures

The entire survey was conducted during the period of March 1 to May 15, 1972. Through the use of random selection, 25 individuals were obtained for each group.

With one group's exception, the questionnaire was given in small classroom settings to groups of 25 soldiers already assembled in anticipation of participation in the testing. The survey was distributed in this manner to one group of soldiers who were being administratively discharged from the Army for other than drug reasons. It was also distributed in like manner to the trainees who made up the control group, those soldiers who had successfully completed training. The survey was distributed and anonymity was reiterated. As the respondents completed the questionnaire, they dropped them into a large box in the middle of the classroom. No command personnel or instructors were present in the classroom while the respondents were completing the questionnaires, a task which required approximately 30 minutes. Cooperation of the soldiers in completing the form was remarkable.

Only four forms were discarded because of incompleteness. Only four survey forms had to be discarded because they contained irrelevant, "humorous" answers and obviously were not taken seriously. In anticipation of receiving a number of forms which would have to be discarded, the writer tested 25 soldiers in each group in order to incorporate at least 60 questionnaires in the survey.

The group referred to as the drug group completed their questionnaires in smaller groups. This was necessary because of the fact that the total number of individuals in the Drug Rehabilitation Program had never, at any given time, exceeded twenty individuals. This fact was the determinant in limiting the total sample to sixty soldiers.

Population

The total sample consisted of sixty enlisted men on active duty assigned to Fort Sam Houston, Texas. Fort Sam Houston is the command and support headquarters for the Army's only training center for combat medical corpsmen and for other units responsible for maintaining the technical skills of field medical personnel.

The U. S. Army Medical Training Center at Fort Sam Houston trains more than 26,000 enlisted medical corpsmen each year. Many of these serve as paramedical personnel in Army hospitals and dispensaries throughout the world.

This study of drug dependent individuals deals with late

adolescent male enlisted trainees. These men are assigned to Fort Sam for the purpose of attending a ten-week course given at the Medical Training Center including classroom instruction and field exercise in all types of bandaging, splinting and resuscitative measures such as tracheotomy and shock treatment. Medical evacuation is also part of the training: manual carries to transport casualties, how to carry stretchers over rough terrain and obstacles, and the procedure for medical evacuation by helicopter. The medical corpsmen trainees learn hospital medical procedures--administration of shots, oxygen therapy and intravenous fluids. The graduate of this center, the combat medical corpsman, is the first link in the Army chain of medical treatment for combat casualties. He gives the vital emergency treatment necessary to sustain life in that critical period before the injured can be moved to a field surgical hospital. Graduates of this center comprise the control group for this survey.

A small number of trainees are unable to complete the program because of intellectual, medical, or psychological deficits. One to two percent are discharged during training because their behavior indicates that they may be unsuitable or unadaptable to the military. They are usually considered to have character disorders of varying degrees. They are administratively discharged from the service. These are the men who made up the category of administrative dischargees.

There is also a small number of trainees who are unable to complete the program because they voluntarily enter the Drug Rehabilitation Program. In December 1970, a major program aimed at the prevention and control of drug abuse was established throughout the U. S. Army (Army Regulation 600-32). The cornerstones of this program were intensive drug education, cooperation with civilian legal authorities in reducing drug traffic, rehabilitation of identified users through group therapy and other psychiatric techniques, and provision of "amnesty" for individuals who voluntarily sought treatment for previous drug abuse. No guarantee of freedom from prosecution was offered for continued drug abuse or for offenses that grew out of drug use. Nevertheless, this program quickly became known as "amnesty." The trainees who voluntarily entered the Fort Sam Houston's Drug Rehabilitation Program comprised the drug group.

At Fort Sam Houston, this program was vigorously supported. The commanding general's personal encouragement of the total program helped ensure maximal implementation. Adequate funding and manpower were assured. A far-ranging educational program, utilizing films, brochures, lectures, displays, and panels by former drug users was established. Widespread publicity was given to the official shift in Army policy, which now encouraged individuals with drug problems to seek aid and deemphasized criminal punishment. Medical and mental hygiene

personnel established procedures for detoxification and psychiatrically oriented follow-up treatment.

Chapter 4

RESULTS

Upon analysis of the results of the questionnaire, it was quickly evident that the individuals in the control group were on the average younger than those in either of the other two groups (Table 1). The columns number refers to the number of that variable as listed in Appendix C. Also these younger individuals had had a significantly greater amount of education than those who entered the drug rehabilitation program. Another characteristic of the control group was that they had younger fathers and mothers than the other two groups.

Of particular significance is the fact that on the average individuals who entered the drug program came from larger families.

The individuals in the Drug Rehabilitation program appeared to have a more disruptive family life in that only seven had their natural parents living together and only seven lived at home until age 16. While the drug group had two fathers who were dead, the administrative discharge group had two individuals whose mothers had died. (Table 2)

One striking factor, and completely unexpected, was the fact that the individuals in the administrative discharge group had parents with more education than those in the other

Table 1

A Comparison of Trainees and Trainees' Families

Column No.		Control Group Mean	S.D.	Admin. Group Mean	S.D.	Drug Group Mean	S.D.
6,7	Age	19.6	2.78	20.75	1.92	20.65	3.22
8,9	Education	12.75	1.70	12.65	2.01	10.95	1.24
12,13	Father's age	48.21	8.13	49.74	6.87	48.44	6.79
14,15	Mother's age	44.70	7.37	47.94	6.54	45.10	5.16
19	Number of brothers	2.31	1.69	2.43	0.96	2.56	1.64
20	Number of sisters	2.53	2.20	1.53	0.78	2.67	1.80

Table 2

Relationship with Family

Column No.		Control Group (N=20)	Administrative Discharge Group (N=20)	Drug Group (N=20)
10	Natural parents live together	16	12	7
12,13	Father deceased	1	1	2
14,15	Mother deceased	0	2	0
16	Lived with both parents until age 16	16	13	7
17	Father with less than 9th grade education	8	4	7
18	Mother with less than 9th grade education	8	2	6
21	Subject only child	2	1	0
21	Subject youngest child	2	5	4
21	Subject oldest child	8	8	5

two groups. The individuals in the control group had parents with the least amount of education.

Upon chi-square analysis of questions 12 through 38 and 49 through 56, the only ones showing evidence of significant difference among all three groups were the questions presented in Table 3. These were significant at the .05 level.

As an example of how the chi-squares were set up, question 12 follows:

	Disagree	Neutral	Agree
Control	3	1	16
Administrative	1	9	10
Drug	7	6	7

This is in contrast to the original responses which were set up with the ratings from 1 through 5, see following example.

	Disagree Strongly		Neutral		Agree Strongly
Control	1	2	1	6	10
Administrative	0	1	9	6	4
Drug	2	5	6	3	4

Further comparisons were conducted by the chi-square method of testing. The Control Group was compared with the Administrative Discharge Group (Table 4). The Control Group was compared to the Drug Rehabilitation Group (Table 5). The Administrative Group was compared to the Drug Group (Table 6).

It is very evident the Control Group felt their family was happy together. Ten individuals in this group agreed

Table 3

A Comparison of Interpersonal and Intrafamilial Relationships and Reported Drug Use Among All Groups

Column No.	Question	x^2 with $p < .05$	D.F.
22	My family was happy together	16.575	8
30	I felt I could talk to my father	21.33	8
32	I lived in a "tough" neighborhood	18.44	8
38	The teachers did not care for me	16.326	8
39	I enjoyed school	19.979	8
58	While in Army, use of Opiates	49.357	8
61	While in Army, use of Barbiturates	22.691	10
62	While in Army, use of Marijuana	26.327	10

Table 4

A Comparison of Interpersonal and Intrafamilial Relationships and Reported Drug Use--Control Group Compared with Administrative Discharge Group

Column No.	Question	x^2 with $p < .05$	D. F.	Agreed Strongly		Never	
				Control	Admin.	Control	Admin.
22	My family was happy together	10.304	4	10	4		
30	I felt I could talk to my father	14.769	4	10	3		
32	I lived in a "tough" neighborhood	N.S.		4	4		
38	The teachers did not care for me	N.S.		1	2		
39	I enjoyed school	9.638	4	6	3		
58	While in Army, use of Opiates	N.S.				19	18
61	While in Army, use of Barbiturates	N.S.				18	13
62	While in Army, use of Marijuana	N.S.				9	8

Table 5

A Comparison of Interpersonal and Intrafamilial Relationships and Reported Drug Use--Control Group Compared with Drug Rehabilitation Group

Column No.	Question	x^2 with $p < .05$	D. F.	Agreed Strongly		Never	
				Control	Drug	Control	Drug
22	My family was happy together	N.S. *		10	4		
30	I felt I could talk to my father	10.682	4	10	4		
32	I lived in a "tough" neighborhood	11.717	4	4	8		
38	The teachers did not care for me	N.S. *		1	5		
39	I enjoyed school	15.143	4	6	0		
58	While in Army, use of Opiates	34.2	4			19	1
61	While in Army, use of Barbiturates	18.571	5			18	6
62	While in Army, use of Marijuana	17.644	5			9	1

* Significant at .1 level

Table 6

A Comparison of Interpersonal and Intrafamilial Relationships and Reported Drug Use--Administrative Discharge Group Compared with Drug Rehabilitation Group

Column No.	Question	x^2 with $p < .05$	D. F.	Agreed Strongly		Never	
				Admin Discharge	Drug	Admin Discharge	Drug
22	My family was happy together	N.S.		4	4		
30	I felt I could talk to my father	N.S.		3	4		
32	I lived in a "tough" neighborhood	9.666	4	4	8		
38	The teachers did not care for me	N.S.		2	5		
39	I enjoyed school	N.S.		3	0		
58	While in Army, use of Opiates	31.01	4			18	1
61	While in Army, use of Barbiturates	N.S.				13	6
62	While in Army, use of Marijuana	12.822	5			8	1

strongly their family's relationship was happy. There was a significant difference (Table 4) between the Control Group and the Administrative Discharge Group.

As evidenced in Tables 4, 5, and 6, there is a striking reversal in the relationships toward the father. Half of the Control Group agreed strongly that they could talk to their father. The paucity of individuals who relate to their fathers in the administrative discharge group and the drug rehabilitation group is apparent.

There was no significant difference between the control group and the administrative discharge group regarding their having lived in a "tough" neighborhood. On the other hand, eight of the drug rehabilitation group agreed strongly to having lived in a "tough" neighborhood. There was a significant difference between both the control group and the administrative discharge group and the drug group (Tables 5 and 6).

Regarding the question, "The teachers did not care for me," in the comparison of the three groups there was a significant difference. Yet, in Tables 4, 5, and 6, there is no evidence of any significant difference at the .05 level.

There was no significant difference between the administrative discharge group and the drug group in their enjoyment of school. Both groups disliked school. There was, however, a significant difference between the control group and the

administrative discharge group and also between the control group and the drug group (Tables 4 and 5). The control group enjoyed school.

Regarding the use of opiates while in the Army, the drug rehabilitation group used opiates at such a tremendous level that when the control group and the administrative group were compared with the drug group, the difference was quite significant.

The control group and the administrative discharge group showed no significant difference in their use of opiates, barbiturates, and marijuana.

Subgroups of Reported Drug Use

To explore possible differences in data and facilitate statistical analysis, drug abuse was arbitrarily subdivided into mutually exclusive patterns based on self-reported drug exposure. Three major categories and several subgroups were delineated: Non-users, users of single drug type (opiates, amphetamines, LSD, barbiturates, marijuana, tranquilizers, cocaine), and multiple drug-users. Specifically, these nine mutually exclusive subgroups with their defining characteristics were:(1) non-users--those individuals who reported they had never used any drug illegally; (2) opiate-users--those who reported using opiate while in the Army but no other illegal drugs; (3) amphetamine-users--those who reported using amphetamines or diet pills while not under a doctor's

supervision in the Army but no other illegal drugs; (4) LSD users--those who reported using lysergic acid diethylamide (LSD) while in the Army but no other illegal drugs; (5) barbiturate-users--those who reported using barbiturates while not under a doctor's supervision in the Army but no other illegal drugs; (6) marijuana-users--those who reported using marijuana while in the Army but no other illegal drugs; (7) tranquilizer-users--those who reported using tranquilizers while not under a doctor's supervision while in the Army but no other illegal drugs; (8) cocaine-users--those who reported using cocaine while in the Army but no other illegal drugs; and, (9) multiple drug-users--those who reported using any combination of two or more of the preceding drug types.

Patterns of Reported Drug Use

The patterns of reported drug use are displayed in Table 7. As can be seen, 15% of the total sample reported no illegal drug use and were classified as non-users. Eight individuals (13.35%) of the total sample were marijuana users. Of these, however, five (62.5%) reported limiting their use to "Only Rarely." Referral to Table 7 reveals that only one other individual (1.75% of the total sample) used a single drug. This individual used LSD "Only Rarely."

In contrast to these users of a single drug type, individuals reporting use of more than one drug type, the multiple drug-users, have a different pattern of use. A high

Table 7

Patterns of Reported Drug Use
Reported No. of Times Drugs Were Used

	No.	% of Total Sample	Never	Only Rarely	Once or Twice a Month	Once or Twice a Week	Once or Twice Daily	More Than Twice Daily
NON-USERS	15	25%	15					
USERS OF SINGLE DRUG TYPE	9	15%						
Opiates								
Amphetamines								
LSD	1	1.75%		1				
Barbiturates								
Marijuana	8	13.35%		5	1	1		1
Tranquilizers								
Cocaine								
MULTIPLE DRUG USERS	36	60%						
Opiates	21	35%		2		5	8	6
Amphetamines	19	31.65%		7	8		3	1
LSD	20	33.35%		8	5	6	1	
Barbiturates	21	35%		9	6	3	3	
Marijuana	28	46.65%		1	3	6	10	8
Tranquilizers	13	21.65%		6	4		1	2
Cocaine	11	18.35%		6	2	2		1

percentage described a greater frequency of drug use. For example, of the 28 multiple drug-users who used marijuana, 18 (64.2%) reported using marijuana more than once or twice daily. This compares to only one (12.5%) of the marijuana users who reported using that drug more than once or twice daily. Similarly, of the 20 multiple drug users who used LSD, eleven (55%) reported using LSD more than once or twice a month in contrast to none of the LSD-users.

The breakdown of patterns of reported drug use are shown in Table 8. Of the non-users, nine (15%) were in the control group and six (10%) were in the administrative discharge group. Naturally, there were no non-users in the drug rehabilitation group. Of the users of single drug type, there were five (8.35%) in the control group and four (6.65%) in the administrative discharge group. Regarding multiple drug-users, the drug rehabilitation group consisted of twenty (33.35%), the administrative discharge group had ten (16.65%) multiple users, and the control group had six (10%).

Referral to Table 9 indicates there is a correlation between the use of "soft" drugs, such as marijuana, leading to other drug use, although there is no evidence of causation. The data of Table 9 indicate that in both the control group and the drug rehabilitation group, marijuana preceded the use of opiates. In the administrative discharge group, statistics

Table 8

Breakdown of Patterns of Reported Drug Use

Subgroup	No.	% of Total Sample
Control Group		
Non-users	9	15.00%
Users of single drug type	5	8.35
Multiple drug-users	6	10.00
Administrative Discharge Group		
Non-users	6	10.00%
Users of single drug type	4	6.65
Multiple drug-users	10	16.65
Drug Rehabilitation Group		
Non-users	0	
Users of single drug type	0	
Multiple drug-users	20	33.35%

Table 9

Number of Users and Median Age at Onset of Usage

Columns No.		Control Group No.	Age	Administrative Group No.	Age	Drug Rehabilitation Group No.	Age
67,68	Opiates	1	18.00	4	15.25	17	18.29
69,70	Amphetamines	9	14.88	8	17.63	13	16.76
71,72	LSD	8	17.25	10	17.70	12	16.00
73,74	Barbiturates	5	16.40	7	17.43	14	16.07
75,76	Marijuana	11	15.63	13	17.00	20	15.15
77,78	Tranquilizers	5	16.20	5	17.60	9	16.76
79,80	Cocaine	3	17.67	5	17.00	9	16.33

are misleading because of one individual who at the age of twelve years began his journey into the world of drugs with opiates. This same individual states he was fifteen years of age when he started using marijuana. Were it not for this individual in the administrative discharge group, the median age for the onset of usage of opiates would have been substantially the same as that in the other two groups. However, based on that one individual's experience, it appears that drug users may have gone on to opium and so forth first without even going through the marijuana stage, although they just happened to be at the marijuana stage at the time they started. This is not to say that marijuana use does not lead to higher drug use, but that there is a correlation between the use of marijuana and the use of other drugs.

Regarding the widespread use of marijuana, in the control group of twenty young men, eleven of them had used marijuana and they started using at the age of 15.63 years. Of the administrative discharges, thirteen had used marijuana and their average age of onset of usage was 17.0 years. On the other hand, the drug group had 100 percent utilization with 15.15 years the average age.

Entry into Service

For some young men, the entry point into the military is non-voluntary, frequently a form of punishment delivered by either the court system or the draft board. It is not

uncommon for judges in district courts, especially in lower socio-economic neighborhoods, because of an absence of civilian facilities perhaps, to suggest--which is tantamount to a court sentence--that enlistment in the military be considered an acceptable punishment in lieu of jail. This tactic seems to be a carry-over from the old English judicial system which helped the navy, especially, maintain its enlistment quotas. Today, in America, it may also serve a similar purpose but has the added motive of removing one "trouble maker" from both the street and the court system. In the control group, not one trainee was forced into the service by a judge in civilian life. On the other hand, five of the drug group and two of the administrative dischargees entered the service through this means.

Arrests and Convictions

It is interesting to note the tremendous difference between the control group and the drug group and again between the administrative discharge group and the drug group regarding arrests and convictions by civilian authorities. Whereas the drug group had been arrested a total of 91 times, the control group had been arrested 15 times and the administrative discharge group 29 times. Regarding convictions, the drug group was convicted a total of 24 times. The control group was convicted six times and the administrative discharge group only four times. It appears rather unusual for the administrative group to have been convicted less than the control group but

Table 10

Arrests and Convictions

	Arrests		Convictions		% of Arrests
	Total	Average	Total	Average	Convicted
Control Group	15	.75	6	.3	40.0%
Drug Group	91	4.55	24	1.20	26.4%
Admin Group	29	1.45	4	.2	13.8%

perhaps that could be attributed to being familiar with the system and having a good lawyer.

Chapter 5

DISCUSSION

This study provides suggestive data particularly in the area of the relationship of the use of marijuana to the use of hard narcotics such as heroin. Although the data do not support the thesis that the use of marijuana, even in high doses, inevitably or even generally, leads to addiction to heroin, it does support the belief that marijuana is very often the first step toward drugs as a way of life, whether or not that involves the use of hard narcotics such as heroin.

General ~~George~~ David E. Thomas, Commanding General of Brooke General Hospital, granted permission for the conduction of this study, by his letter dated 12 September 1972, see Appendix B. In an interview, General Thomas made a statement regarding a computerized survey on drug usage in Vietnam. He said that one interesting thing that particular study brought out was that there were people who used marijuana who did not use heroin, but there were no heroin users who were not first marijuana users.

This study corroborates a statement by Kales et al. (1969:591-614) that several drugs are frequently abused at a time. Thus the individual who is dependent on a single drug is becoming a rare clinical entity. (See Table 7, p.32).

The question then is: Why do some persons need to use marijuana in such large quantities and need to go on to drugs as a way of life? As regards alcohol addiction, Jellinek (1960:152) speaks of a "marked" population, for whom for whatever reasons--he suggests neurotic trends or other personality inadequacies or constitutional factors--alcohol is more rewarding than it is for persons in the normal population.

If this model can be applied to our drug users, the question then is: What are the characteristics of our "marked" population? It was the intention of this researcher to isolate significant factors relating to characteristic interpersonal and intrafamilial relationships prevalent in the trainees who entered the drug rehabilitation program, the trainees who could not handle life situations. The aim was to discover whether a distinction relating to a participating or precipitating role in causing antisocial behavior (drug dependency) could be made between three groups of late adolescent males. There was no anticipation of making any startling new discoveries in this field, and in fact, none were made. There were found, however, some tentative conclusions.

These conclusions were that the control group had a much more harmonious family life, a better relationship with their fathers, came from neighborhoods which they did not consider "tough", and enjoyed school more than the other groups. There was also a significant difference in their use of opiates and

barbiturates as compared to that of the other groups. The difference between the arrests and convictions of the three groups was tremendous and quite significant.

To substantiate the findings, it was decided to utilize the discriminant analysis mode comparing the control group and the drug group to classify them, by a set of independent variables, into two mutually exclusive and exhaustive categories in order to produce a predictive formula which the Army could use to discriminate drug dependent individuals prior to entry into the service.

Each analysis was initiated utilizing twelve variables, including the family relationship (FM), the father relationship (FT), neighborhood status (NEI), teacher relationship (TEA), school preference (S), opium usage (OP), barbiturate usage (B), marijuana usage (MJ), arrests (A), convictions (C), natural parents living together (NP), and whether or not the individual lived at home until age 16 (AGE).

For the first five variables, the responses ranged from 1 (disagree strongly) to 5 (agree strongly). For variables six, seven, and eight, the responses ranged from 1 (never used) to 6 (more than twice daily). Variables nine and ten utilized the actual number of arrests and convictions. Variables 11 and 12 had been answered with either "yes" or "no" and the dummy variables of 1 and 0 were used where 1 was "yes" and 0 was "no."

Using the forty individuals in the control and drug groups, comparisons were made between the 20 in the control group and the 20 in the drug group. This produced the following totally descriptive formula: Z = .072FM -.054FT -.028NEI +.043TEA -.008S -.1690P -.100B -.050MJ -.003A -.026C +.178NP +.070AGE. A D^2 of 39.19 with an F (12,27) of 23.21 was obtained. If Z was greater than -0.53074, the individual was in the control group. If Z was less than -.78390, the individual was in the drug group.

The higher the absolute value of a coefficient, the more significant is that variable in describing (discriminating) the two groups. For example: in the preceding formula family relationship was more significant than father relationship, neighborhood status, teacher relationship, or school preference; opium usage was more significant than barbiturate usage or marijuana usage; convictions were more significant than arrests; and whether or not the natural parents were living together was more significant than whether or not the individual lived at home until age 16.

Using the same forty individuals, a second analysis was conducted comparing the 14 less than weekly users and the 26 more than weekly users. This produced the following formula: Z = .016FM -.006FT -.015NEI +.076TEA +.017S +.0010P -.050B -.118MJ -.018A -.016C -.021NP +.046AGE. A D^2 of 21.26 with an F (12,27) of 11.45 was obtained. If Z was greater than .109, the individual was in the less than weekly user group. If Z

was less than -.083, the individual was in the more than weekly user group.

A third analysis was conducted using the same forty soldiers, however, this time the 14 non-users (including five marijuana users) were compared to the 26 users. The following formula was obtained: Z = .025FM +.027FT +.022NEI +.027TEA + .003S -.039OP -.029B -.068MJ -.010A +.004C -.063NP +.030AGE. A D^2 of 16.10 with an F (12,27) of 8.67 was obtained. If Z was greater than .028, the individual was in the non-user group. If Z was less than -.035, the individual was in the user group.

Another discriminant analysis (a partial observation) utilized only 30 observations. Five randomly selected individuals from the control group and five from the drug group were omitted for this test. Upon completion of this analysis, the discriminant function coefficients were extracted. These coefficients were utilized in the following manner. For each individual omitted, the scores for each variable were multiplied by the appropriate coefficient. These results were then totaled and the resultant figure was classified as to which group it fell in. All cases, utilizing the coefficients, fell within the boundaries of their appropriate groups. In this analysis, the following formula was obtained: Z = .125FM -.083FT -.033NEI +.074TEA -.032S -.2080P -.148B -.064MJ - .009A -.009C +.319NP +.026AGE. A D^2 of 35.84 with an F (12,17) of 13.60 was obtained. If Z was greater than -.552,

the individual was in the control group. If Z was less than -.937, the individual was in the drug group.

It was decided to do one further type of discriminant analysis. This time the computer cards from the preceding analyses were shuffled and randomly inserted into two ill-defined groups. The resultant formula was Z = .011FM +.012FT -.001NEI +.019TEA +.012S +.023OP -.017B -.011MJ -.003A +.015C -.010NP -.040AGE. A D^2 of 2.94 with an F (12,27) of 1.74 was obtained. If Z was greater than .12793, the individual was in one group. If Z was less than .12790, the individual was in the second group. The purpose of this shuffled analysis was to see how well the two ill-defined groups could be discriminated; to see whether or not a good discrimination could be obtained without predetermined information as to which group an individual belonged.

Since it would be very difficult for the Army to extrapolate from volunteers their usage of opium or barbiturates, these variables, although highly relevant, were omitted from further analyses. These further analyses were conducted to produce one descriptive formula.

In order to derive the best formula a number of different procedures were followed. Primarily it was necessary to select only those formulas which were able to discriminate the two groups with at least 90 percent accuracy. At this point a number of formulas were eliminated. Those which were not eliminated were then scrutinized to determine which had sta-

tisfically significant F scores. At this point several more formulas were eliminated. Finally, with the remaining formulas, the size of the discriminant function coefficients was taken into consideration in the following manner. If, when the Z critical area was taken into consideration, an individual who was borderline would not be reclassified based on a complete switch in the range of a variable, that variable was not considered a good discriminator. Therefore, any formulas containing coefficients that were not good discriminators, were also eliminated. At this juncture, two formulas remained and both were in the less than weekly vs. more than weekly grouping. These formulas are evidenced in Tables 11 and 12.

It was felt the regression mode would be appropriate to verify the above formulas. Prior to utilizing this mode, however, a correlation matrix was run to distinguish the variables of relevance (Table 13). Excluding opium and barbiturates, those variables which were greater than .500 were considered relevant. Based on this correlation matrix only the family relationship, teacher relationship, marijuana usage and arrests were relevant. Utilizing these variables, a regression analysis was run (Table 12).

Another regression, one that corresponded with the discriminant analysis in Table 11, was run and is evidenced therein. However, the T-values were appropriate only for those variables considered relevant by the correlation matrix.

Table 11

Descriptive Formula
Less Than Weekly vs. More Than Weekly
Discriminant Analysis/Regression Analysis

	Discriminant Analysis*	Regression Analysis**	
Variables	D^2 = 17.39, F = 13.88 Coefficients	R^2 = 80.2 T-Values	F = 13.49 Coefficients
Family	.051	-2.079	-6.716
Neighborhood	-.013	0.796	1.754
Teacher	.048	-1.963	-6.064
School	.018	-0.797	-2.416
Marijuana	-.110	6.895	15.770
Arrests	-.013	2.288	1.869
Convictions	-.020	1.251	2.851
Natural Parents	-.028	0.439	3.849
Age	.040	-0.624	-5.077

% Correct Classification					
Discriminant Analysis				Regression Analysis	
All Observations	Partial	Random Criteria	Shuffled	All Observations	Shuffled
100%	100%	35.5%	65%	100%	65%

*If the value of the function is greater than .077, the individual is a less than weekly user.

**If the value of the function is negative, the individual is a less than weekly user.

Table 12

Predictive Formula
Less Than Weekly vs. More Than Weekly
Discriminant Analysis/Regression Analysis

	Discriminant Analysis*	Regression Analysis**	
Variables	D^2 = 15.40, F = 32.28 Coefficients	R^2 = 78.3 T-Values	F=31.57 Coefficients
Family	.044	-2.227	-6.341
Teacher	.033	-1.928	-4.652
Marijuana	-.106	8.527	16.560
Arrests	-.016	3.933	2.516

% Correct Classification

Discriminant Analysis				Regression Analysis	
All Observations	Partial	Random Criteria	Shuffled	All Observations	Shuffled
98.5%	96.9%	35.5%	55%	100%	55%

*If the value of the function is greater than .0029, the individual is a less than weekly user.

**If the value of the function is negative, the individual is a less than weekly user.

Table 13

Correlation Matrix

Variables	FM	FT	NEI	TEA	S	OPIUM	BARB.	MJ	ARRESTS	CON.	N.P.	AG
Family	1.000	.531	.043	-.451	.306	-.165	-.258	.057	.397	.205	-.249	.2
Father	.531	1.000	-.135	-.428	.232	-.353	-.204	-.122	.272	.134	-.092	.0
Neighborhood	.043	.135	1.000	.131	-.087	.419	.254	.100	-.073	-.038	.277	-.
Teacher	-.451	-.428	.131	1.000	-.603	.089	-.002	-.062	.083	.083	.092	.0
School	.306	.232	.087	-.603	1.000	-.119	-.147	.011	-.033	.178	-.301	.0
Opium	-.165	-.353	.419	.088	-.119	1.000	.459	-.081	-.153	-.135	.334	-.2
Barbiturates	-.258	-.204	.254	-.002	-.147	.459	1.000	.091	-.442	-.318	.601	-.2
MJ	.057	-.122	.100	-.062	.011	-.081	.091	1.000	.026	-.059	.209	.6
Arrests	.397	.272	-.073	.084	-.033	-.153	-.442	.026	1.000	.636	-.363	.3
Convictions	.205	.134	-.038	.083	.178	-.135	-.318	-.059	.636	1.000	-.358	.0
Natural Parents	-.249	-.092	.277	.092	-.301	.334	.601	.209	-.363	-.358	1.000	-.0
Age	.279	.073	-.164	.052	.034	-.254	-.272	.646	.365	.041	-.046	1.0
Dep. Var.	.140	-.223	.176	.253	.151	.108	-.110	-.129	.272	.377	-.169	.0

Table 13

Correlation Matrix

FM	FT	NEI	TEA	S	OPIUM	BARB.	MJ	ARRESTS	CON.	N.P.	AGE	Dep.Var.
1.000	.531	.043	-.451	.306	-.165	-.258	.057	.397	.205	-.249	.279	.140
.531	1.000	-.135	-.428	.232	-.353	-.204	-.122	.272	.134	-.092	.073	-.223
.043	.135	1.000	.131	-.087	.419	.254	.100	-.073	-.038	.277	-.164	.176
-.451	-.428	.131	1.000	-.603	.089	-.002	-.062	.083	.083	.092	.052	.254
.306	.232	.087	-.603	1.000	-.119	-.147	.011	-.033	.178	-.301	.034	.151
.165	-.353	.419	.088	-.119	1.000	.459	-.081	-.153	-.135	.334	-.254	.108
.258	-.204	.254	-.002	-.147	.459	1.000	.091	-.442	-.318	.601	-.272	-.110
.057	-.122	.100	-.062	.011	-.081	.091	1.000	.026	-.059	.209	.646	-.129
.397	.272	-.073	.084	-.033	-.153	-.442	.026	1.000	.636	-.363	.365	.272
.205	.134	-.038	.083	.178	-.135	-.318	-.059	.636	1.000	-.358	.041	.377
.249	-.092	.277	.092	-.301	.334	.601	.209	-.363	-.358	1.000	-.046	-.169
.279	.073	-.164	.052	.034	-.254	-.272	.646	.365	.041	-.046	1.000	.077
.140	-.223	.176	.253	.151	.108	-.110	-.129	.272	.377	-.169	.077	1.000

The most appropriate descriptive formula would be that evidenced in Table 11, Z = .051FM -.013NEI +.048TEA +.018S -.110MJ -.013A -.020C -.028NP +.040AGE. In this case, if Z is greater than .077, the individual is a less than weekly user. The higher the value of Z, the more likely the individual will be a good soldier and not drug dependent.

The predictive formula the Army should use to discriminate their drug dependent individuals is evidenced in Table 12, Z = .044FM +.033TEA -.106MJ -.016A. If Z is greater than .0029, the individual is a less than weekly user and not drug dependent. As an example of how this formula will discriminate individuals, the following is presented utilizing soldiers listed in Appendix C, as 01,04, and 32.

Number	Formula	Results	Group
01	Z=.044(5) +.033(4) -.106(2) -.016(3)	= .092	Less Than
04	Z=.044(4) +.033(1) -.106(4) -.106(0)	=-.215	More Than
32	Z=.044(4) +.033(5) -.106(4) -.016(15)	=-.323	More Than

In Tables 11 and 12 the percent correctly classified is also demonstrated. "All observations" refers to the 40 observations with 14 in the less than weekly group and 26 in the more than weekly group. "Partial" refers to 32 observations, 12 in the less than weekly group and 20 in the more than weekly group. The "random criteria" percentage was obtained through the use of Morrison's formula (Morrison 1971: 0-1). This formula is P(Correct) = px + (1-p)(1-x). When

p = the true proportion of the individuals in the group of interest (i.e. 14/40) and x = the proportion classified by the formula in the group of interest. "Shuffled" refers to the 40 observations which had been shuffled and randomly divided into two groups, one with 14 observations and the other with the remaining 26.

This percent correctly classified is significant in discriminant analysis and is somewhat analogous to R^2. One tells how well the individual was classified; the other tells how much variance was explained. As long as the percent correctly classified is greater than the percent for the random criteria, then the function is supposedly "good."

The means and standard deviations of variables of importance (Table 14) were utilized to make sure the standard deviations were approximately the same for the variables included in the formulas. All were with the exception of arrests which was measured on a much different scale than the other variables. Knowing an assumption was violated, the arrests were left in because the regression analysis said it was relevant.

Since the discriminant analysis pointed out that the most appropriate formula was in the less than weekly vs. more than weekly breakdown, it was decided to run a few more tests to verify that the results in Table 1, 2, 3, and 10 were still significant in the less than weekly vs. more than weekly break-

Table 14

Means and Standard Deviations of Variables of Importance
Less Than Weekly vs. More Than Weekly

Column No.		Less Than Mean	Less Than S.D.	More Than Mean	More Than S.D.
22	Family Relationship	4.429	0.821	3.154	1.321
30	Father Relationship	3.643	1.630	2.731	1.558
32	Neighborhood Status	3.000	1.254	3.231	1.625
38	Teacher Relationships	2.286	1.161	2.769	1.552
39	School Preference	3.500	1.547	2.192	1.272
58	Opium Usage	1.071	0.258	3.885	1.948
61	Barbiturate Usage	1.000	0.000	2.423	1.541
62	Marijuana Usage	1.429	0.623	4.423	1.149
49	Arrests	0.786	1.264	3.654	5.744
51	Convictions	0.357	0.718	0.962	1.786
10	Natural Parents	1.286	0.452	1.500	0.500
16	Age	1.214	0.410	1.538	0.498

down. Those additional tests are evidenced in Tables 15, 16, 17, and 18.

The individuals in the less than weekly user group were on the average younger than those in the more than weekly group (Table 15). These younger individuals were also more educated. However, these individuals had on the average older parents and came from larger families than those individuals in the more than weekly user group.

Family life in both groups was substantially the same (Table 16).

Chi-square analysis of those questions evidenced in Table 3 were all significant again at the .05 level with the exception of "I lived in a 'tough' neighborhood" which was significant at the .1 level (Table 17).

The arrests and convictions were substantially the same as those evidenced in Table 10.

As both Casterline and Vaillant pointed out, testing can be utilized to identify and screen out the potential deviant physician. The problem of the deviant is definitely not confined to medical school admissions. The same problems are facing the Army with its attempt at maintaining a sizeable force without the aid of the draft.

With the conclusions of the discriminant analyses, and regression analyses, it is evident that pre-existing states of mind and attitudes of individuals can be determined and utilized in screening volunteers. The Army should pursue

Table 15

A Comparison of Trainees and Trainees' Families
Less Than vs. More Than Weekly Users

Column No.		Less Than Mean	S.D.	More Than Mean	S.D.
6,7	Age	19.29	1.83	19.81	2.47
8,9	Education	12.57	1.68	11.42	1.60
12,13	Father's age	44.93	15.45	44.92	14.17
14,15	Mother's age	45.00	8.28	44.92	4.99
19	Number of brothers	2.21	1.93	2.00	1.66
20	Number of sisters	2.71	2.40	2.04	1.81

Table 16

Relationship with Family
Less Than Weekly vs. More Than Weekly

Column No.		Less Than (N=14)	More Than (N=26)
10	Natural parents live together	10	13
12,13	Father deceased	1	2
14,15	Mother deceased	0	0
16	Lived with both parents until age 16	11	12
17	Father with less than 9th grade education	6	9
18	Mother with less than 9th grade education	6	8
21	Subject only child	1	1
21	Subject youngest child	0	6
21	Subject oldest child	5	8

Table 17

A Comparison of Interpersonal and Intrafamilial Relationships and Reported Drug Use
Less Than Weekly Users vs. More Than Weekly Users

Column No.	Question	x^2 with $p < .05$	D.F.	Agreed Strongly		Never	
				Less	More	Less	More
22	My family was happy together	11.39	4	8	6		
30	I felt I could talk to my father	13.70	4	8	6		
32	I lived in a "tough" neighborhood	N.S.*		3	9		
38	The teachers did not care for me	10.16	4	9	5		
39	I enjoyed school	16.05	4	5	1		
58	While in Army, use of Opiates	17.8	4			13	7
61	While in Army, use of Barbiturates	14.36	5			14	10
62	While in Army, use of Marijuana	30.33	5			9	1

*gnificant at .1 level

Table 18

Arrests and Convictions
Less Than Weekly vs. More Than Weekly

	Arrests		Convictions		% of Arrests
	Total	Average	Total	Average	Convicted
Less Than Weekly User	11	.786	5	.357	44.0%
More Than Weekly User	95	3.65	25	.961	26.3%

a testing phase in screening volunteers with the intention of recognizing maladjusted young people who are unable to solve problems and, instead, create drug problems for the Army.

Thought should be given as to what the functions of recruiting stations are. It must be remembered that there is a fundamental difference between manpower control, such as attempting to increase the supply of soldiers, and the management of competence. Presently, recruiting stations cannot do both. If they are expected to maintain a competence level, they must be given assistance in their selection of young men through the use of sophisticated testing procedures.

Regarding the last question on the questionnaire, "What persuaded you to enter the Drug Rehabilitation Program?", many and varied answers were received. It must first be pointed out, however, that this particular question was not included in the questionnaires of the individuals in the control group nor in those in the administrative discharge group.

Some of the answers were as follows: "I was forced into it under military policy.", "I don't know.", "Discharge.", "Got scared.", "I wanted to come home from Vietnam, because my tour was finished, and I was hooked on heroin.", "I were caught in urine test.", "I wanted to be able to get help in quitting drugs completely.", "To get off of heroin.", "Needed help.", "To try and find something new that would try to get me from using it.", and "I was forced.".

Individual attitudes toward treatment are obvious. It was also obvious that all individuals are not "voluntarily" seeking treatment as per Army Regulation 600-32. The importance of the "negative" attitude is quite apparent. If drug rehabilitation programs, as presently designed, are to be effective, these attitudes or barriers toward treatment must first be recognized and overcome.

Chapter 6

SUMMARY

This study was an attempt to discover significant factors relating to interpersonal and intrafamilial relationships prevalent in a group of trainees at Fort Sam Houston, Texas. The conclusion was reached that no single cause clearly leads to drug dependency. However, in this study, a number of adverse influences did characterize the drug group or more than weekly user group.

This study was conducted through the use of a five-page questionnaire which placed emphasis on individual information, family information, military information, and drug information. Most of the questions were rated from 1 through 5, the rating of 1 corresponding to disagree strongly and the rating of 5 corresponding to agree strongly. Some of the questions were answered with a "yes" or a "no." Some were rated from 1 through 6, the rating of 1 corresponding to never used and the rating of 6 corresponding to use more than twice daily.

Chi-square analysis produced variables of relevance, which variables were then analyzed through the use of discriminant analysis. The discriminant analyses produced a predictive formula which could distinguish for the Army their drug dependent individuals. This formula is $Z = .044FM + .033TEA - .106MJ - .016A$, where Z equals the value of the

function. FM is equal to family relationship and is rated on a scale from 1 to 5; TEA is equal to teacher relationships and is rated on a scale from 1 to 5; MJ is equal to marijuana usage and is rated on a scale from 1 to 6; and, A is equal to the actual number of arrests.

Based on the preceding formula, it is recommended that the Army incorporate the following questions in their recruiting tests:

1. Was your family happy together?
2. Did your teachers care for you?
3. How often do you use marijuana?
4. How many times have you been arrested?

The roots of drug dependence lie within the psychological make-up of the individual himself. This make-up of the individual is a direct reflection of his family life which is evident from the results of the discriminant analysis.

It is imperative for the Army, for society, to be able to isolate those individuals who fall into this category of people. Society can do much to encourage an individual's self-development. The most important thing it can do is to remove the obstacles to individual fulfillment. This means doing away with the gross inequalities of opportunity imposed on some of our citizens by race prejudice and economic hardship. And it means a continuous and effective operation of talent salvage to assist young people to achieve the promise

that is in them. The benefits are not only to the individual but to the society.

There is apparently no magic solution to the problem of drug abuse. We must provide alternatives to drug use and at the same time we will provide alternatives to other forms of human difficulties. After all, truly effective solutions to the "problem of drugs" are the effective solutions to the "problem of people" and the "problem of life." Those solutions, applied to every level of experience could make man's abuse of himself and others fade into an historical remembrance of a thankfully transcended cultural psychosis.

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APPENDIXES

APPENDIX A

COPY OF QUESTIONNAIRE

QUESTIONNAIRE

Please fill in or circle appropriate answers. Answer each question.

Individual Information:

1. Age: _____

2. Education: (Years in a public or private school system)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Family Information:

3. My natural parents presently live together. Yes No

4. One or both of my natural parents are deceased. Yes No

5. Father's present age _____

6. Mother's present age _____

7. I lived with both of my natural parents until age 16. Yes No

8. My father had less than a 9th grade education. Yes No

9. My mother had less than a 9th grade education. Yes No

Siblings' Present Status:

10. Number of brothers: _____ Ages: _____

11. Number of sisters : _____ Ages: _____

The following statements are about your "family life" (mother, father, brother, sister). Based on your past experience indicate to what degree you agree or disagree with these statements.

	Disagree Strongly		Neutral		Agree Strongly
12. My family was happy together.	1	2	3	4	5

		Disagree Strongly		Neutral		Agree Strongly
13.	I got along well with my brothers/sisters.	1	2	3	4	5
14.	My family did things together.	1	2	3	4	5
15.	My parents were happy together.	1	2	3	4	5
16.	My parents were quite strict with me.	1	2	3	4	5
17.	My parents were concerned with my welfare.	1	2	3	4	5
18.	My family seemed to move from place to place a lot.	1	2	3	4	5
19.	My parents were seldom around.	1	2	3	4	5
20.	I felt I could talk to my father.	1	2	3	4	5
21.	I felt I could talk to my mother.	1	2	3	4	5

The following are statements about your experience in the neighborhood (the one in which you resided the longest time) and work.

22.	I lived in a "tough" neighborhood.	1	2	3	4	5
23.	The kids were nice to me.	1	2	3	4	5
24.	I had few friends.	1	2	3	4	5
25.	Drugs were available to me.	1	2	3	4	5
26.	I got into trouble.	1	2	3	4	5
27.	I did not like school.	1	2	3	4	5
28.	The teachers did not care for me.	1	2	3	4	5
29.	I enjoyed school.	1	2	3	4	5
30.	My parents were not satisfied with my school work.	1	2	3	4	5
31.	I had difficulty with school work.	1	2	3	4	5

	Disagree Strongly		Neutral		Agree Strongly
32. I hope to continue my schooling.	1	2	3	4	5
33. I changed from job to job.	1	2	3	4	5
34. I enjoyed working.	1	2	3	4	5
35. I had difficulty getting along with people at work.	1	2	3	4	5
36. My jobs were boring.	1	2	3	4	5
37. I frequently lost jobs because I was not at work on time.	1	2	3	4	5
38. I usually quit my jobs after a few days or weeks.	1	2	3	4	5

39. How many times have you been arrested by civilian authorities? _____times

40. How many times have you been convicted by civilian authorities? _____times

Military Information:

41. Method of entry into service: (circle one)

a. Volunteered (enlisted)

b. Drafted

c. Other

Read each statement and indicate whether you agree or disagree with the following statements.

"I entered the Army because:"

42. I was forced by a judge in civilian life.	disagree	agree
43. The Army was a way to learn a job or skill.	disagree	agree
44. I wanted to get away from some problems in civilian life.	disagree	agree

45. I have always wanted to be a soldier. disagree agree

46. I knew the draft would get me so I joined the Army. disagree agree

47. I had nothing else to do. disagree agree

48. I wanted to see what the Army was like. disagree agree

While in the Army, how often have you used the following drugs WITHOUT medical prescription? (circle one number for each drug)

	Never	Only Rarely	Once or Twice a Month	Once or Twice a Week	Once or Twice Daily	More Than Twice Daily
49. Opiates (morphine,heroin)	1	2	3	4	5	6
50. Amphetamines	1	2	3	4	5	6
51. LSD (acid), mescaline	1	2	3	4	5	6
52. Barbiturates (seconal, tuinal)	1	2	3	4	5	6
53. Marijuana or Hashish	1	2	3	4	5	6
54. Tranquilizers (Librium, Thorazine)	1	2	3	4	5	6
55. Cocaine	1	2	3	4	5	6

56. How old were you when you first used any of the drugs in #49-55 without a medical prescription? _____years.

If you used any of the following, how old (years) were you when you first started using each?

57. Opiates _____years

58. Amphetamines _____years

59. LSD, mescaline _____years

60. Barbiturates _____years

61. Marijuana or Hashish _____years

62. Tranquilizers _____years

63. Cocaine _____years

64. What persuaded you to enter the Drug Rehabilitation Program?

APPENDIX B

COPY OF LETTER OF PERMISSION

DEPARTMENT OF THE ARMY
BROOKE GENERAL HOSPITAL
BROOKE ARMY MEDICAL CENTER
FORT SAM HOUSTON, TEXAS 78234

MEDEM-H

12 September 1972

SUBJECT: Permission for Thesis Study for HCA Course

To Whom It May Concern

Mrs. Patricia M. Kearns has the permission of this Headquarters to pursue a statistical study of the parameters of drug addiction in the military service.

DAVID E. THOMAS, M.D.
Brigadier General, MC
Commanding

APPENDIX C

RESULTS OF QUESTIONNAIRE

RESULTS

01	03	04	05	06	08	10	11	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
01	1	1	1	20	13	2	2	39	34	2	2	2	3	1	3	5	4	3	5	1	5	4	1	5	5	1	5	1	3	2	4	4	1	1
02	1	1	1	19	13	1	2	43	41	1	2	2	2	1	2	5	3	4	5	5	5	1	1	2	2	3	4	1	3	1	1	2	4	5
03	1	1	1	10	12	2	2	37	37	2	1	1	0	1	2	2	4	3	1	2	1	1	5	1	1	3	5	1	5	1	1	1	5	1
04	1	2	2	21	16	1	2	44	42	1	2	2	0	1	2	4	5	4	5	3	5	4	1	5	5	1	5	1	5	3	1	1	5	1
05	1	1	1	17	12	1	2	40	39	1	1	1	1	1	2	4	5	5	4	2	5	1	1	5	5	1	5	1	5	1	1	1	5	1
06	1	2	2	18	12	1	2	49	37	2	2	1	1	1	2	3	2	3	3	5	5	5	3	1	3	2	2	5	5	5	5	5	1	5
07	1	1	1	17	11	2	1	30	35	2	2	2	1	2	2	5	5	5	5	4	5	1	1	1	5	5	1	3	1	1	1	1	5	1
08	1	2	1	17	11	1	2	46	42	1	2	2	0	0	2	5	0	5	5	3	5	1	1	5	5	5	3	1	5	1	5	1	1	5
09	1	1	1	24	16	1	2	66	60	1	2	2	0	0	2	4	0	4	5	4	5	1	1	5	5	3	3	5	4	3	2	2	4	3
10	1	1	1	21	14	1	2	52	50	1	2	2	3	2	3	4	4	4	4	3	2	2	2	3	3	2	4	2	2	2	3	2	4	3
11	1	1	1	20	12	1	2	45	42	1	2	2	1	3	3	4	4	3	5	3	5	5	1	5	2	3	3	1	5	3	3	3	3	3
12	1	1	1	17	10	1	2	37	40	1	2	2	1	7	3	5	3	5	5	2	5	3	1	5	5	5	5	1	5	2	5	3	1	4
13	1	2	2	20	13	1	2	52	43	1	1	1	2	2	3	2	3	2	2	2	4	1	4	1	4	2	4	2	5	3	2	4	4	3
14	1	1	1	21	12	1	2	61	57	1	1	1	7	4	3	5	2	3	5	1	4	4	3	5	4	5	4	5	1	5	1	4	5	1
15	1	1	2	13	12	1	2	63	60	1	1	1	2	9	3	5	3	2	4	3	5	1	1	2	3	2	4	5	5	3	5	3	1	4
16	1	1	1	20	13	1	2	45	42	1	1	2	4	3	3	5	4	5	5	5	5	1	1	5	5	3	2	3	1	1	1	1	4	3
17	1	1	1	13	12	1	2	53	47	1	2	1	5	2	3	5	5	4	5	4	5	3	1	5	4	3	4	1	1	1	1	1	5	1
18	1	1	1	18	11	2	2	47	39	1	1	1	1	2	3	4	3	3	4	3	5	2	2	2	4	3	3	2	5	4	4	4	2	5
19	1	2	2	19	14	1	2	43	41	1	2	2	1	0	1	5	4	5	4	3	5	3	2	3	3	1	4	1	5	2	1	1	4	1
20	1	2	2	17	12	1	2	53	52	1	1	2	2	1	1	1	5	1	5	1	5	5	1	1	5	3	1	1	5	1	5	3	1	4
21	2	2	2	17	09	2	1	00	42	2	2	2	1	1	2	4	5	4	4	3	5	1	1	3	5	1	3	3	1	3	5	3	1	5
22	2	2	2	20	12	2	1	43	40	2	2	2	2	1	2	1	4	1	1	2	4	5	3	1	3	3	4	2	5	1	5	5	1	5
23	2	2	2	19	11	1	2	48	46	1	1	2	3	1	2	5	5	4	5	3	5	1	1	3	4	1	2	1	4	4	2	1	4	1
24	2	2	2	29	12	2	2	49	44	1	2	2	1	1	2	2	4	5	3	2	5	1	1	5	5	1	5	1	1	1	2	1	2	2
25	2	2	2	19	11	2	2	42	39	2	2	2	1	0	2	2	3	1	4	5	3	5	3	1	4	4	2	2	5	5	4	4	1	2
26	2	2	2	20	12	1	2	65	60	1	2	2	1	2	1	2	5	2	5	3	5	1	4	1	3	4	3	3	5	5	5	5	1	1
27	2	2	2	20	10	2	2	47	43	2	2	2	1	1	1	3	5	3	3	3	5	1	3	3	3	1	3	1	1	1	1	1	1	5
28	2	2	2	18	12	1	2	51	[illegible]	[illegible]	2	1	4	0	1	3	5	4	5	3	5	1	1	5	5	5	5	1	3	3	3	1	[illegible]	4
29	2	2	2	21	10	1	2	62	52	1	2	2	0	2	1	4	4	4	4	3	4	3	2	3	3	4	3	3	4	5	3	3	2	4
30	2	2	2	18	12	2	2	33	37	2	2	2	1	3	3	3	5	5	2	2	5	5	3	5	3	5	4	1	2	1	4	3	2	3
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34	2	2	2	20	12	2	2	49	42	2	1	1	0	3	3	1	5	1	1	4	5	1	1	1	4	5	4	4	4	3	3	3	3	1
35	2	2	2	19	09	2	[illegible]	00	52	2	0	1	6	5	3	5	5	3	5	3	5	1	1	3	3	5	3	1	5	3	3	3	1	5
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37	2	2	2	19	08	2	2	44	42	1	1	1	4	2	3	2	5	1	2	3	4	1	3	1	5	[illegible]	4	1	5	5	5	5	1	5
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42	3	1	[illegible]	20	12	2	1	00	60	1	1	1	4	3	3	5	5	5	5	3	5	1	1	5	5	3	4	1	3	3	1	1	4	3
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60	3	1	2	21	10	2	2	45	41	2	2	2	0	0	2	3	0	1	1	4	5	4	3	5	3	4	4	1	2	3	4	3	3	4

	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	75	77	79
01	2	3	4	4	1	3	1	1	00	0	1	1	2	2	1	1	1	1	1	1	2	1	1	19	00	00	00	00	19	00	00
02	4	5	1	5	1	3	1	1	00	0	1	1	1	2	2	1	1	1	1	1	2	1	1	17	00	17	00	17	17	17	00
03	1	5	2	5	1	1	1	1	00	0	1	1	2	2	1	1	1	1	1	1	2	1	1	00	00	00	00	00	00	00	00
04	1	5	2	4	1	3	1	2	00	0	1	1	1	1	2	1	1	1	2	1	4	1	1	16	00	18	18	18	16	00	00
05	1	5	1	4	1	3	1	1	02	2	1	1	1	2	1	2	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
06	3	5	1	3	5	5	1	1	02	0	1	1	1	2	2	2	1	4	1	6	5	1	1	12	00	13	14	12	12	12	00
07	1	5	1	5	1	3	1	1	00	0	1	1	2	1	2	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
08	1	5	5	1	1	3	1	1	00	0	1	1	2	2	1	1	1	1	1	1	4	1	1	11	00	00	00	00	00	00	00
09	2	5	1	5	1	1	1	1	01	0	1	1	2	1	1	1	1	1	1	1	2	1	1	17	00	21	22	00	17	00	00
10	2	5	1	3	2	3	1	1	00	0	1	1	2	1	1	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
11	3	5	1	5	1	3	1	1	00	0	1	1	2	1	2	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
12	2	4	5	4	1	2	1	3	00	0	1	1	2	1	1	2	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
13	1	5	1	4	2	3	1	1	00	0	1	1	2	1	1	2	1	1	1	1	1	1	1	00	00	00	00.	00	00	00	00
14	1	5	4	4	1	3	1	4	01	1	1	1	2	1	2	1	1	2	2	2	4	2	2	18	00	13	18	20	18	20	20
15	5	1	3	4	3	3	1	1	00	0	1	1	2	2	1	1	2	1	1	1	1	1	1	00	00	00	00	00	00	00	00
16	3	5	1	3	2	3	1	1	00	0	1	1	2	2	2	1	1	1	1	1	1	1	1	16	18	17	17	00	16	00	17
17	1	5	2	4	1	3	1	1	00	0	1	1	2	2	1	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
18	2	5	3	4	1	2	1	1	04	2	1	1	2	2	1	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
19	1	5	3	5	1	3	1	1	00	0	2	1	1	1	1	1	1	1	1	1	2	1	1	15	00	15	16	15	15	15	16
20	1	5	1	5	1	5	1	5	02	1	1	1	2	2	2	1	1	2	3	1	4	1	1	17	00	17	18	00	17	17	00
21	3	5	1	3	5	3	5	5	00	0	1	1	2	2	1	2	4	5	4	5	4	2	1	15	17	15	16	15	15	15	00
22	3	5	5	4	1	5	2	1	00	0	1	2	1	2	1	2	1	4	3	4	2	5	3	2	16	20	19	16	16	16	16	18
23	2	5	1	5	1	1	1	1	06	5	1	2	1	1	1	1	5	1	1	2	6	1	1	16	19	16	17	16	16	00	00
24	2	3	1	5	1	1	1	1	00	0	2	1	2	1	1	1	5	2	1	2	5	3	1	25	28	26	00	28	25	28	00
25	1	5	5	4	1	1	3	2	02	1	3	2	1	2	1	1	5	2	2	2	6	1	2	15	16	18	17	18	15	00	18
26	5	5	5	1	3	5	5	5	00	0	1	1	2	1	1	5	2	2	2	6	1	2	15	19	15	15	15	15	15	18	
27	1	1	3	5	1	1	1	1	01	0	3	1	1	2	1	1	5	3	2	4	6	2	6	15	19	15	15	15	15	15	18
28	4	5	3	5	3	4	1	1	02	0	1	1	2	1	1	1	5	5	4	1	5	6	1	19	19	00	00	00	19	00	00
29	1	4	3	4	3	3	2	4	07	6	1	1	2	1	1	1	5	3	3	4	3	3	2	14	15	16	16	14	14	16	15
30	2	5	4	5	1	4	1	1	00	0	1	1	2	2	2	1	6	2	1	2	5	1	1	14	16	17	00	16	13	00	00
31	3	5	1	5	1	3	1	1	02	0	2	1	1	1	1	2	1	3	5	1	1	16	00	00	00	18	15	00	00		
32	2	4	1	5	4	3	1	1	15	3	1	2	1	1	1	1	6	2	2	2	4	2	2	07	12	15	15	12	07	13	17
33	1	5	5	1	1	5	3	3	06	1	2	1	1	1	1	1	5	1	1	1	5	1	1	15	19	00	00	00	15	00	00
34	1	5	1	2	1	4	1	1	00	0	1	1	2	2	2	1	1	1	1	4	4	1	4	15	00	00	00	16	15	00	20
35	3	5	1	5	1	3	1	1	25	0	1	1	2	1	1	2	6	1	2	1	2	1	1	16	19	00	19	00	16	00	00
36	4	1	2	4	1	1	1	1	00	0	1	1	1	1	1	2	2	5	5	5	5	1	1	15	00	15	15	15	15	15	00
37	5	3	5	5	3	5	4	5	10	0	1	1	1	2	1	2	4	3	4	5	5	1	3	11	19	14	15	13	11	15	13
38	3	5	5	1	5	3	5	5	07	5	1	1	2	2	1	2	5	3	3	3	1	1	2	11	17	15	15	13	11	00	15
39	2	5	1	5	1	1	1	1	08	3	1	2	1	1	1	1	6	1	1	1	4	1	1	13	17	00	00	00	13	00	13
40	3	5	3	3	2	3	1	1	00	0	1	1	2	1	1	1	5	1	1	1	4	1	1	21	21	00	00	00	21	00	00
41	1	5	5	3	1	3	1	3	16	0	1	1	2	1	1	1	4	3	3	3	6	6	4	12	12	13	17	19	15	19	12
42	3	3	3	4	1	3	1	1	00	0	2	1	1	1	1	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
43	1	5	5	5	1	1	3	1	02	1	2	1	1	1	1	1	3	2	3	4	1	1	14	16	15	14	14	14	17	19	
44	1	5	4	3	1	2	1	1	00	0	1	1	2	1	2	1	1	1	1	6	1	1	18	00	00	00	00	18	00	00	
45	2	4	2	5	1	2	1	1	00	0	2	1	1	1	1	1	1	1	1	1	1	1	1	19	00	19	00	00	19	00	00
46	4	1	2	2	2	2	2	2	00	0	2	1	1	1	1	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
47	3	1	1	5	1	1	1	1	03	0	1	2	1	1	1	1	1	2	1	3	1	1	15	00	00	16	00	15	00	00	
48	3	1	1	3	2	3	1	1	00	0	2	1	1	1	1	1	2	3	2	1	1	1	17	00	18	17	00	00	00	00	
49	1	1	5	1	5	3	1	1	01	1	2	1	1	1	1	1	3	4	2	5	2	3	17	00	19	20	20	17	20	19	
50	4	5	4	4	2	4	5	1	02	0	1	1	2	2	1	2	1	1	1	1	1	1	1	00	00	00	00	00	00	00	
51	4	5	2	4	1	4	1	1	01	1	1	1	2	2	1	1	1	1	1	1	3	1	1	18	00	00	00	00	18	00	00
52	3	5	1	5	1	1	1	1	00	0	2	1	1	1	1	1	1	1	1	2	1	3	3	1	14	15	15	16	15	14	14	16
53	2	5	2	3	2	3	1	1	01	0	2	1	1	1	1	1	1	1	2	3	2	6	2	1	16	00	19	20	18	16	00	00
54	2	5	4	3	3	3	2	2	00	0	2	1	1	1	1	1	1	1	1	1	1	1	1	00	00	00	00	00	00	00	00
55	2	5	4	5	4	1	1	3	00	0	1	1	2	2	2	1	1	1	1	2	1	1	1	22	00	00	00	00	22	00	00
56	1	5	5	5	1	3	3	4	01	0	1	1	1	1	1	2	3	4	1	6	2	2	15	19	19	19	18	15	18	19	
57	2	4	3	1	4	3	4	2	00	0	2	1	1	1	1	1	1	1	1	1	1	1	30	00	00	00	00	00	00	00	
58	4	5	4	3	2	4	3	1	00	0	2	2	1	1	1	1	1	1	1	4	5	1	1	19	00	00	00	00	19	00	00
59	1	5	3	1	2	5	1	1	01	1	2	1	1	1	1	1	1	1	2	1	6	1	1	19	00	00	20	00	19	00	00
60	4	4	3	3	1	4	4	4	02	0	1	1	1	2	2	1	1	1	2	1	1	1	1	18	00	00	18	00	00	00	00

KEY TO RESULTS

Column	1,2	Person #01, 02, 03 . . . 60
	3	Control (1) Drug (2) Administrative Discharge (3)
	4	Less than Weekly used (1) vs. More than weekly user (2)
	5	Non-user (1) vs. User (2)
	6,7	Age in years
	8,9	Education in years
	10	Natural parents living together. Yes (1) No (2)
	11	One or both of natural parents deceased Yes (1) No (2)
	12,13	Father's age
	14,15	Mother's age
	16	Lived with natural parents until 16 Yes (1) No (2)
	17	Father with less than 9th grade education Yes (1) No (2)
	18	Mother with less than 9th grade education Yes (1) No (2)
	19	Number of brothers
	20	Number of sisters
	21	Place in family. Youngest (1) Oldest (2) Other (3)
	22	Question No. 12
	23	13
	24	14
	25	15
	26	16
	27	17
	28	18
	29	19
	30	20
	31	21
	32	22
	33	23
	34	24
	35	25
	36	26
	37	27
	38	28
	39	29
	40	30
	41	31
	42	32
	43	33
	44	34
	45	35
	46	36
	47	37
	48	38

49,50	Number of arrests
51	Number of convictions
52	Entry into service: Voluntary (1) Draft (2) Other (3)
53	Question No. 42: Disagree (1) Agree (2)
54	43
55	44
56	46
57	47
58	Opiate usage
59	Amphetamine usage
60	LSD usage
61	Barbiturate usage
62	Marijuana usage
63	Tranquilizer usage
64	Cocaine usage
65,66	Age first used drugs
67,68	Age first used opium
69,70	Age first used amphetamine
71,72	LSD
73,74	Barbiturates
75,76	Marijuana
77,78	Tranquilizers
79,80	Cocaine

VITA

Patricia M. Kearns, daughter of Mr. and Mrs. Jerome E. Steiner of Dunedin, Florida, was born on May 17, 1937, in Ancon, Canal Zone, and graduated from Balboa High School, Balboa, Canal Zone, in 1955.

She received her Associate of Arts degree from the Canal Zone Junior College in 1957. She received her Bachelor of Arts degree from Incarnate Word College, San Antonio, Texas, in May, 1971, and in September, 1971, entered the Graduate Program of Health Care Administration at Trinity University, San Antonio, Texas. Her Master of Science degree will be received in August, 1973.

Married to James R. Kearns, a Regular Army officer, she is the mother of three children, James, Jr., Colleen and Annette, ages twelve, eleven, and nine respectively.